In The Claims:

1. (Currently Amended) A glow discharge detector, comprising:

a first annular member,

a pair of annular members mounted in spaced relation in said first annular member,

a member having a tapering end mounted in one of said pair of annular members, and

a solid member having a flat end mounted in another of said pair of annular members.

2. (Original) The detector of Claim 1, wherein said first annular member comprises a glass tube.

3. (Original) The detector of Claim 2, wherein said pair of annular members comprise a pair of stainless steel tubes.

4. (Previously Amended) The detector of Claim 3, wherein each of said member having a tapering end and said solid member is composed of tungsten.

Claims 5 and 6, cancelled.

7. (Previously Amended) The detector of Claim 1, wherein said tapering end of said member is tapered to a point, and wherein said point is located closely adjacent to said solid member.

8. (Previously Amended) The detector of Claim 1, additionally including an electrical circuit including a power supply, a capacitor, and a plurality of resistors.

9. (Previously Amended) The detector of Claim 8, wherein said capacitor is electrically connected intermediate a pair of resistors.

10. (Original) The detector of Claim 9, wherein said pair of resistors are each of a different size.

11. (Currently Amended) In a hand-held gas chromatograph, the improvement comprising:

a direct current, constant wave glow discharge detector,

said detector including a solid anode having a flat end and

said detector including a member having a ~~painted~~ pointed end defining a ~~Langmuin-like~~ probe whereby variations of electron density due to trace amounts of impurities in a carrier gas of the gas chromatograph can be directly measured.

12. (Original) The improvement of Claim 11, wherein the constant wave glow discharge of the detector is controlled through a biased resistor

13. (Currently Amended) The improvement of Claim 11, wherein said glow discharge detector includes:

an outer annular tube composed of glass,

a pair of annular tubes mounted in spaced relation in said outer annular tube and composed of stainless steel,

~~said pair of annular tubes being mounted in said outer annular tube,~~

said ~~Langmiur-like~~ probe being mounted in one of said spaced pair of annular tubes, with the pointed end thereof being located closely adjacent another of said pair of annular tubes, and said ~~with the~~ pointed end member being composed of tungsten, and

said solid anode being mounted in said another of said pair of annular tubes.

14. (Currently Amended) The improvement of Claim ~~14~~ 13, wherein said member with the pointed end is mounted in said one of said pair of annular tubes by at least one pinched area in said one of said pair of annular tubes.

15. (Currently Amended) The improvement of Claim 14, wherein said member with the pointed end, said solid anode, and said pair of annular tubes are each mounted coaxially in said outer annular tube.

16. (Original) The improvement of Claim 14, wherein said pair of annular tubes are only partially located within said outer annular tube.

17. (Previously Amended) The improvement of Claim 14, wherein, said member with the pointed end and said solid anode are composed of refractory metals with low work functions selected from the group consisting of tungsten, molybdenum, and urananium or metals composed of copper or gold which would not be poisoned by oxygen.

18. (Currently Amended) The glow discharge detector of Claim 1, wherein said detector is controlled through a ~~braised~~ biased resistor.

19. (Previously Added) The glow discharge detector of Claim 1, wherein said member having a tapered end and said solid member are each mounted coaxially in said first annular member.

20. (Previously Added) The glow discharge detector of Claim 1, wherein said member having a tapered end and said solid member are mounted coaxially in said pair of annular members.

21. (Previously Added) The glow discharge detector of Claim 1, wherein said member having a tapered end and said solid member are mounted in said pair of annular members so as to partially extend therefrom.

22. (Previously Added) The glow discharge detector of Claim 1, wherein said pair of annular members are only partially located within said first annular member.